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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/604,482	07/24/2003	Jon O. Reynolds	ITW7510.052	1481
33647	7590	12/12/2005	EXAMINER	
ZIOLKOWSKI PATENT SOLUTIONS GROUP, SC (ITW)			SHAW, CLIFFORD C	
14135 NORTH CEDARBURG ROAD			ART UNIT	
MEQUON, WI 53097			PAPER NUMBER	
			1725	

DATE MAILED: 12/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/604,482	REYNOLDS ET AL.	
	Examiner	Art Unit	
	Clifford C. Shaw	1725	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10/4/2005 and 8/19/2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 October 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>0815</u> . | 6) <input type="checkbox"/> Other: _____ |

Detailed Action

1.) On 8/19/2005, applicant filed an amendment in response to the Office action mailed on 6/14/2005. On 10/4/2005, applicant filed a supplemental amendment, with a new set of claims. The instant Office action addresses the claims filed in the 10/4/2005 supplemental amendment.

2.) The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3.) Claims 1-12 and 19-24 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Independent claim 1 has been amended to specify that the transmitter transmits a signal "at a frequency within an extremely low radio frequency (ELF) range". Independent claim 19 has been amended to include limitations directed to a low frequency signal within the range of approximately 1.3 Hz to 100Hz. These new limitations in the amended claims directed to extremely low frequency signals or to low frequency signals constitute new matter not supported by the original specification. The original specification makes no mention of low frequency signals used to transmit control data in the manner claimed. In the original specification, the transmitter associated with the welding control transmits a single pulse each

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time the human operator depresses the torch trigger. This single pulse encodes control information in its pulse width and its pulse height ; the range of permissible pulse widths has been chosen to accommodate the degrading effects of weld cable impedance (see paragraph 0029). There is no mention of a low frequency, and especially of an extremely low radio frequency, to transmit control data in the original specification. Note that the pulse disclosed by applicant with a width between 10 and 750 milliseconds would have to be continuously repeated in order to have a frequency, specifically a frequency between 1.3 and 100Hz. However, applicant's control pulse is not disclosed as being repeated. In order to set welding parameters, a single pulse is transmitted, with the welding control parameters encoded in pulse height and pulse width. There is no repetition of this single pulse until the next time that it is desired to change welding parameters. Without pulse repetition, there is no pulse frequency and applicant's references to frequency in the claims constitute new matter. The other claims are deemed to contain new matter at least because they depend from independent claim 1 or 19.

4.) Claims 13-18, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over the European patent application no. 0575082A2 taken with Bulwidas, Jr. (4,227,066, cited by applicant) further taken with Hsien (5,276,305, cited by applicant). Figure 6 and the discussion thereof in the European patent application no. 0575082A2 disclose a welding system with features claimed including: a power source 3; electrode holder 53; transmitter 6 that when activated emits signals to control the welding process, including wirefeed at auxiliary units 55 and 57 as discussed at column 4, lines 9-20; receiver 4 that receives signals from the transmitter, which signals are coupled to and transmitted over the welding cable 2. The claims differ from

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the European patent application no. 0575082A2: in calling for the trigger associated with the transmitter to be on the electrode holder; in calling for signals between approximately 10 milliseconds and 750 milliseconds; and in calling for a kit in claim 25. These differences do not patentably distinguish over the prior art. The European patent application no. 0575082A2 does not explicitly disclose how the transmitter 6 is configured with respect to the welding torch.

Without any explicit teaching, it would have been obvious at the time applicant's invention was made to have positioned element 6 with respect to torch 53 in any conventional fashion. In particular, it would have been obvious to have mounted transmitter 6 and its associated triggers on welding torch 53, the motivation being the teachings of Bulwidas, Jr. (4,227,066) that it is advantageous to mount remote control units on a welding torch (see element 15 mounted on torch handle 12 in Bulwidas, Jr. (4,227,066)). In regard to the signal duration, it would have been obvious to have used any conventional modulation scheme in the European patent to encode the control signals. Particularly, it would have been obvious to have encoded the control signals with a scheme having the claimed durations, the motivation being the teachings of Hsien (5,276,305) that such an encoding approach is useful in a remote controlled welder (see the modulation approach shown in figures 2 and 3 of Hsien (5,276,305) and note that the length of the control pulse between start A and stop C is approximately 7 cycles of the 110 Hz clock which yields a pulse length falling within the range claimed). In regard to the "kit" limitation of claim 25, it is considered obvious that the various modules of the control system would exist in an independent form before they were combined into the overall system. This independent form would constitute a "kit", thereby satisfying the claim.

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5.) Applicant's arguments filed in the "Remarks" section of the amendment filed on 8/19/2005 have been fully considered but they are not persuasive. Claims 1-12 and 19-24 are considered to be directed to new matter, as discussed above. Claims 13-18, and 25 have been amended to overcome the new matter rejection, but they are considered to be unpatentable for the reasons set forth above.

6.) Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

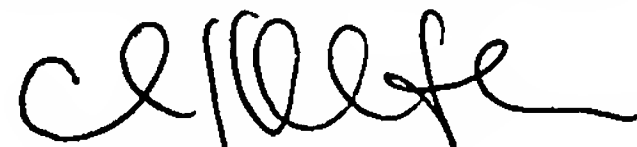
Any inquiry concerning this communication should be directed to Clifford C Shaw at telephone number 571-272-1182. The examiner can normally be reached on Monday through

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Friday of the first week of the pay period and on Tuesday through Friday of the second week of the pay period.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Thomas G. Dunn, can be reached at 571-272-1171. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Clifford C Shaw
Primary Examiner
Art Unit 1725

December 8, 2005